Illinois Department of
Natural Resources
One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

Pat Quinn, Governor
Marc Miller, Director

October 22, 2013

Mr. Will Nash, Village Engineer
Village of New Lenox
1 Veterans Parkway
New Lenox, IL 60451

RE: Vancina Lane Retail Development, New Lenox, Will County
Endangered Species Consultation Program
EcoCAT Review #1400484

Dear Mr. Nash:

The Department has received from Hey & Associates, Inc., a submission for this project for the purposes of consultation with the Village of New Lenox pursuant to the *Illinois Endangered Species Protection Act* [520 ILCS 10/11], the *Illinois Natural Areas Preservation Act* [525 ILCS 30/17], and Title 17 *Illinois Administrative Code* Part 1075.

The site of the proposed retail development contributes runoff to a ravine passing through the subdivision to the north where it enters Hickory Creek, which then passes through the **Hickory Creek Barrens Nature Preserve**. Hickory Creek, itself, provides essential habitat for sparse populations of the State-listed threatened **Spike Mussel**, *Elliptio dilatata*, and the **Slippershell Mussel**, *Alasmidonta viridis*. Cooler, cleaner runoff waters will greatly benefit the Nature Preserve, Hickory Creek, and the plant and animal species which inhabit them.

Construction of the proposed retail development poses a short-term threat to both the Nature Preserve and the essential habitat of the listed mussels through water-borne silt and sediment. Following construction, the development will pose a longer-term threat through water quality degradation in terms of higher temperatures, salt, polycyclic aromatic hydrocarbons (PAHs), and automotive fluids consisting of natural and synthetic oils, brake and transmission fluids, and antifreeze.

Recommendation #1: The project should be held to strict compliance with the provisions of its NPDES Construction Permit, including regular inspection and maintenance of control measures. Use of mulches or temporary cover crops (green mulch) on disturbed areas is encouraged. The object is to minimize off-site migration of silt and suspended solids. Adult and juvenile mussels, and many other aquatic invertebrates, are dependent on water flow through the interstitial spaces between rocks and gravel on the creek bed, which can be clogged with silt, suffocating them.

Recommendation #2: The on-site detention basin should be designed as a "wet" detention basin with features replicating wetland environments and structural elements maximizing the length of the flow path to the discharge point. The basin should include a silt trap at the inflow point, and the discharge structure should take water from a depth of at least four feet rather than from the surface of the impoundment. The basin should be the first element of the development constructed. These features will maximize treatment of pollutants through biological activity and photolysis and release the coolest water from the basin.

Recommendation #3: The detention basin should be supplemented by a number of upstream water quality treatments, being the final element in a treatment train. Other stormwater treatment options include consideration of a green (vegetated) roof, bio-swales, use of pervious pavement, rain gardens, and underground storage/infiltration.

Recommendation #4: The number of parking spaces, which nearly doubles the number of those required, should be reduced to provide space for additional water treatment train technologies. According to the preliminary plan provided for the Department's review, 130 parking spaces (93%) in excess of requirements are provided. Reducing the number of spaces will provide room for technologies such as rain gardens and bio-swales as well as spaces landscaped with trees which can shade parking areas, reducing the temperatures of summer-time runoff waters.

Eighty parking spaces are provided along the exterior perimeter of the lot. Generally, these are farthest from building entrances and are most likely to be least used by patrons. Thus, substitution of green spaces for water treatment and infiltration along the perimeter is unlikely to inconvenience potential patrons, will substantially reduce impervious surfaces, will significantly improve off-site water quality and improve the aesthetic appearance of the streetscape while still providing 36% more parking than minimum requirements, which are already generous.

Minimizing hardscape features in a watershed shared with a Nature Preserve and endangered species essential habitat is distinctly positive, especially when it can be achieved without compromising the objectives of the development.

Recommendation #5: Serious consideration should be given to the installation of a "green roof" on the main structure or, alternatively, to the installation of solar energy panels. Use of roof-top vegetation is a demonstrated technique for reducing run-off volume, improving off-site water quality (especially temperature), and reducing interior energy requirements for heating and air-conditioning. While solar energy panels will not chemically contribute to improved water quality, they can significantly reduce the external energy demand of the facility and reduce roof-top temperatures as incident infra-red light is converted to electricity.

Avoiding unnecessary urban outdoor heating will become increasingly important as climate change places additional burdens on community energy consumption and water use. A combination of vegetation and solar panels may provide optimum benefits for both water quality and energy conservation.

Consultation on the part of the Department is closed, unless the Village desires additional information or advice related to this proposal. In accordance with 17 Ill. Adm. Code 1075.40(h), the Village should notify the Department of its decision regarding these recommendations, whether it will:

- Proceed with the action as originally proposed;
- Require the action to be modified per Department recommendations (please specify which measures if not all will be required); or
- Forgo the action.

This consultation is valid for two years unless new information becomes available which was not previously considered; or the proposed action is modified; or additional species, essential habitats, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review primarily reflects the information existing in the Illinois Natural Heritage Database at the time of this consultation, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments.

If additional protected resources are encountered during the project's implementation, the applicant must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action. Please contact me if you have questions regarding this review.

Sincerely,

Keith M. Shank
Impact Assessment Section
Division of Ecosystems and Environment
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(217) 785-5500

cc: Steve Rauch, Hey & Associates, Inc.